## Curriculum Vitae, Dr. Oleg Obolensky

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#### Research:

### Current projects:

- Peptide fragmentation studies for protein identification and sequencing through collision induced dissociation in tandem mass spectrometry
- Energy minimization formulation of electrostatics suitable for biomolecular systems

### Previous research:

- *Molecular and biological physics*: structure formation and stability of molecular complexes, statistical analysis and characterization of unfolded polypeptides, molecular mechanisms of DNA damage
- Atomic cluster physics: electronic and ionic structure of metal clusters, fission processes
- *Theoretical atomic physics*: ordinary and polarizational bremsstrahlung, electron correlations in atoms, photon interactions with atoms
- *Theory of solid state*: electron-electron interactions in solids, optical properties of metal-semiconductor structures.

# **Employment and visiting appointments:**

- *January* 2008 *present:* contracting Research Specialist at the National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, Bethesda, MD, USA.
- October 2004 December 2007: Junior Fellow at the Frankfurt Institute for Advanced Studies, Johann Wolfgang Goethe-University, Frankfurt am Main, Germany.
- *November* 2002 *April* 2004: NATO/NSF Fellow and Research Associate at the Department of Physics and Astronomy, University of Pittsburgh, PA, USA.
- April 2000 November 2001: Research Associate at the Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, PA, USA.
- *May 1999 present:* Research Fellow at the A. F. Ioffe Physical-Technical Institute of the Russian Academy of Sciences, Saint Petersburg, Russia

**Education:** A. F. Ioffe Physical Technical Institute, Russian Academy of Sciences & School of Electronics at St. Petersburg State Electrotechnical University, St. Petersburg, Russia.

- 1996 Master of Science (Diploma work: "Influence of exchange interaction on band gap narrowing in semiconductors". Diploma with honor)
- **2000** Candidate of Physical and Mathematical Sciences in theoretical physics, equivalent to Ph.D. degree (Ph.D. thesis: "Polarizational bremsstrahlung from inner shell electrons")

#### **Main Academic Honors:**

- NATO/NSF Postdoctoral Fellowship (November 2002 October 2003), USA
- Fellowship in Physics for talented young scientists sponsored by the Russian Foundation for Basic Research (January 2001 December 2001), St. Petersburg, Russia
- Graduate student fellowship from the Soros Foundation (1998), St. Petersburg, Russia
- Prize winner of the St. Petersburg City competition of PhD student research (1997 & 1998),
  St. Petersburg, Russia
- Prize winner of the Russian National competition of student research (1995), Russia

### **Memberships:**

- American Physical Society
- American Society for Mass Spectrometry